



## Abbreviated Water and Sewer Needs

# PRELIMINARY WASTEWATER BASIS OF DESIGN REPORT FOR BLACK ROCK COFFEE – 7000 EAST SHEA

Scottsdale, Arizona

26 August, 2020

PREPARED FOR  
Vertical Design Studios  
4650 East Cotton Center Boulevard  
Phoenix, Arizona 85040

DEVELOPER  
SimonCRE  
6900 East 2nd Street  
Scottsdale, Arizona 85251

SITE ADDRESS  
7000 East Shea Boulevard  
Scottsdale, Arizona 85254

## PRELIMINARY Basis of Design Report

☒ **ACCEPTED**

☐ **ACCEPTED AS NOTED**

☐ **REVISE AND RESUBMIT**



Disclaimer: If accepted; the preliminary approval is granted under the condition that a final basis of design report will also be submitted for city review and approval (typically during the DR or PP case). The final report shall incorporate further water or sewer design and analysis requirements as defined in the city design standards and policy manual and address those items noted in the preliminary review comments (both separate and included herein). The final report shall be submitted and approved prior to the plan review submission.

For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

**BY** rsacks

**DATE** 10/8/2020

PREPARED BY



4450 north 12<sup>th</sup> street, #228  
phoenix, arizona 85014  
CYPRESS # 19.131

30-DR-2020  
10/5/2020

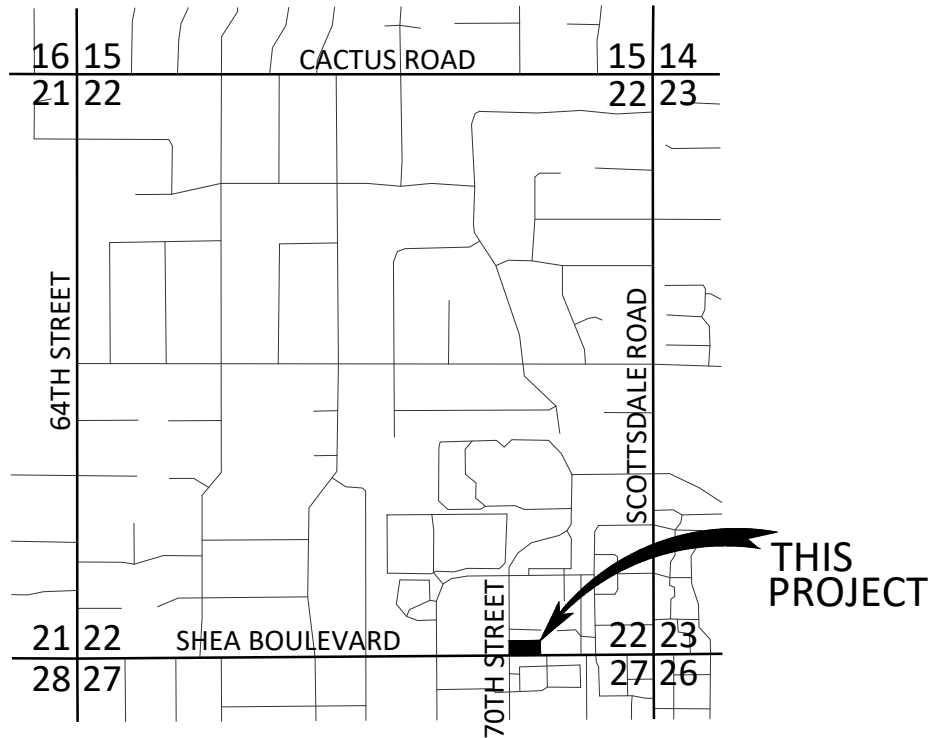
## TABLE OF CONTENTS

---

LOCATION MAP	1
INTRODUCTION	1
EXISTING CONDITIONS	1
PROPOSED CONDITIONS	1
REQUIRED COMPUTATIONS	1
CONCLUSION	2

### APPENDICES

- A City of Scottsdale Sewer Quarter Section Map
- B Preliminary Site Plan
- C Preliminary Improvement Plan



IN THE SE 1/4 OF THE SE 1/4 OF SECTION 22,  
T. 3 N., R. 4 E., G.&S.R.M.,  
CITY OF SCOTTSDALE, MARICOPA COUNTY, ARIZONA



LOCATION MAP

## **INTRODUCTION: PROJECT DESCRIPTION AND LOCATION**

The Project is known as 'Black Rock Coffee - 7000 East Shea' and is located at 7000 East Shea Boulevard in Scottsdale, Arizona. The Project is located at the northeast corner of Shea Boulevard and 70<sup>th</sup> Street and is a part of the larger Scottsdale Promenade shopping center.

The proposed Project consists of redevelopment of the parcel by removing an existing retail building and replacing it with a new drive-thru coffee building with associated paved access, parking, utility, and drainage improvements.

The utility provider for sewer facilities is the City of Scottsdale.

## **EXISTING CONDITIONS**

Per available utility maps and as-built records, an existing 8" PVC sewer main runs east-west and is located in the shopping center drive aisle just north of the Project. Refer to Appendix A for City of Scottsdale Water and Sewer Quarter Section Map showing sewer main and service.

## **PROPOSED CONDITIONS**

There will be one new drive-thru restaurant building to replace the existing building. The design team intends to tap the existing 8" sewer main to the north with a new 6" service to the building. Refer to Appendix C for Preliminary Site Plan and Appendix D for Preliminary Improvement Plans.

## **REQUIRED COMPUTATIONS**

The Project improvement shall include a single 6-inch sanitary waste line from the proposed building to the existing 6-inch main, located as previously described. The table below summarizes the wastewater fixture units of the building:

TYPE	QUANTITY	DFU/FIXTURE	TOTAL DFU
WATER CLOSET (TANK)	2	4	8
LAVATORY	4	1	4
JANITOR'S SINK	1	3	3
KITCHEN SINK	4	2	8
SERVICE SINK	4	3	12
		<b>TOTAL</b>	<b>35</b>

The Project's anticipated drainage fixture unit count is 35 and is designed with a 6-inch sewer line with a minimum slope of 2.0% (1/4" per foot). Per the International Plumbing Code, Table

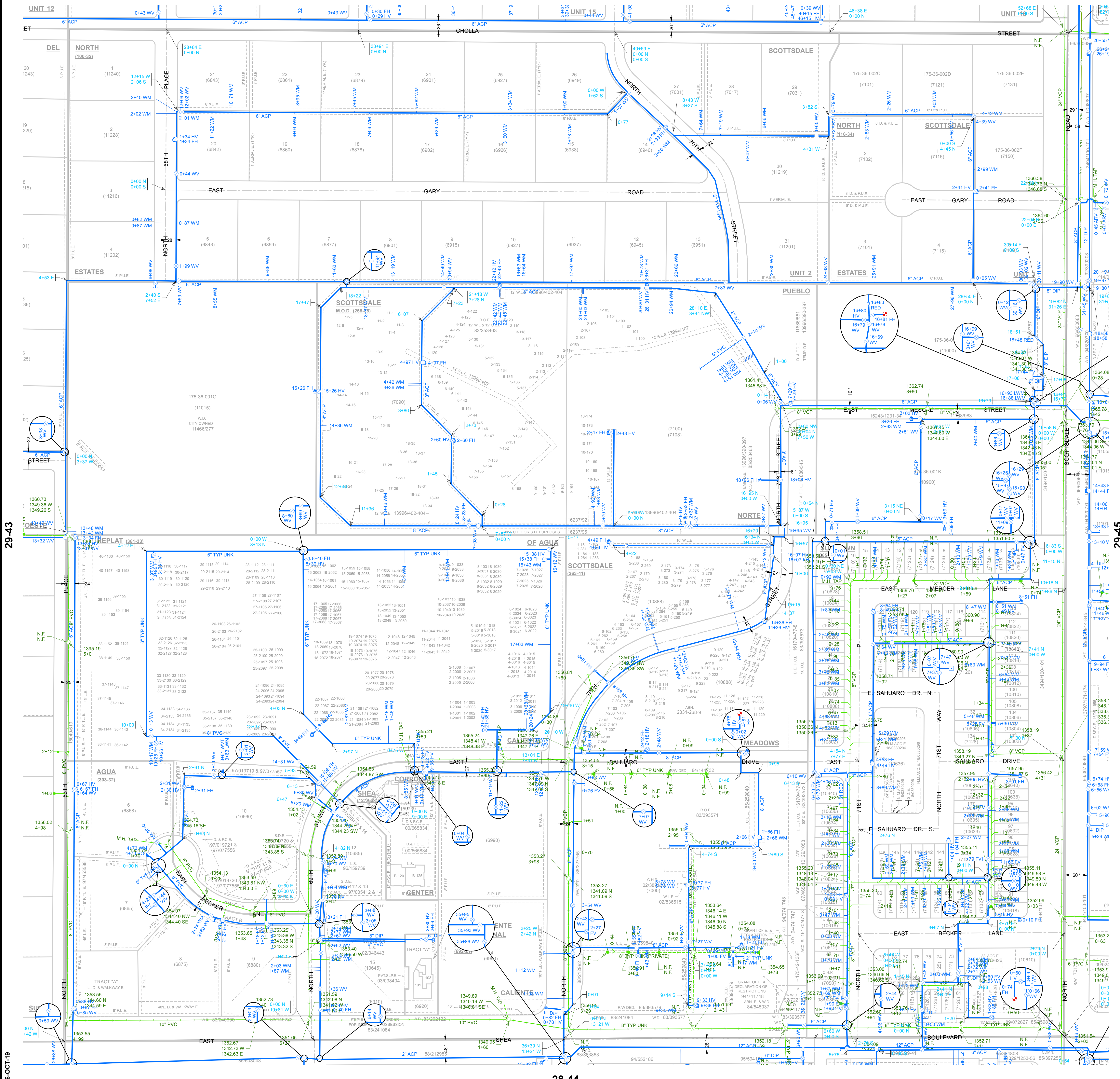
710.1(1), the maximum DFU based on the above parameters is 840; thus the expected maximum 35 DFU is acceptable.

### **CONCLUSION**

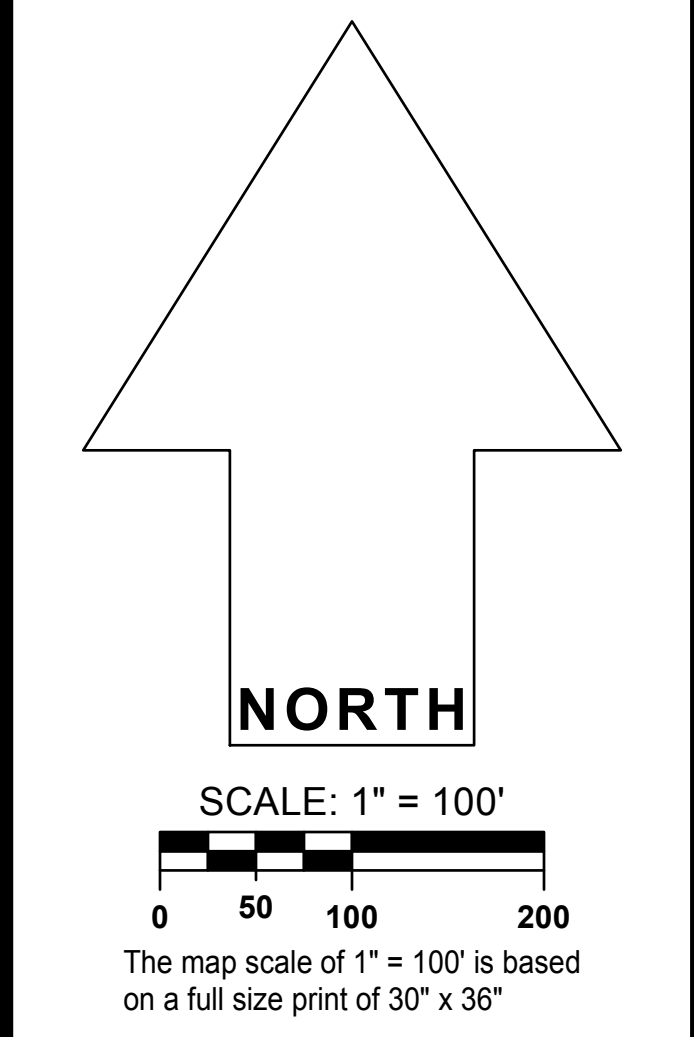
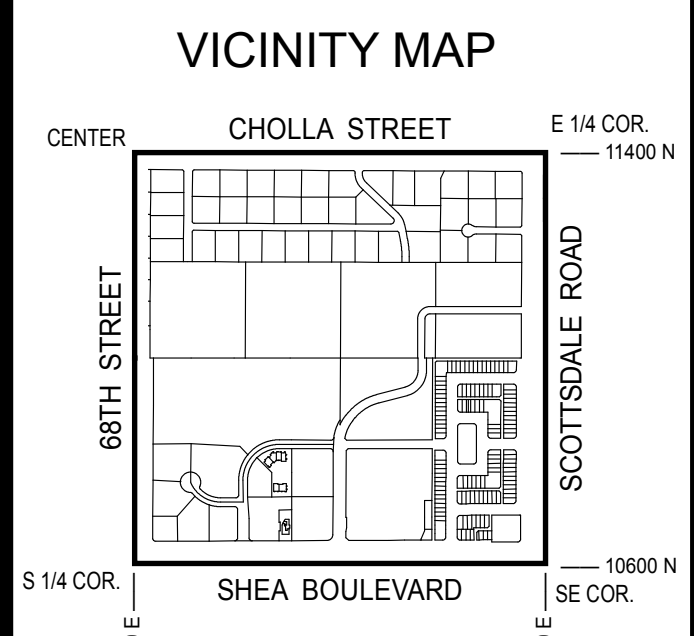
CYPRESS respectfully submits this report as the Preliminary Wastewater Design Report for the Black Rock Coffee - 7000 East Shea Development. The proposed wastewater system shall be designed in accordance with ADEQ, International Building Code, and the City of Scottsdale standards.

Appendix A  
City of Scottsdale Sewer Quarter Section Map





- GENERAL NOTES:**
- THIS IS A COMPUTER GENERATED DRAWING. FOR ANY REVISIONS PLEASE CONTACT THE CITY OF SCOTTSDALE GIS DEPARTMENT AT (480) 312-7792.
  - THE SECTION LINE BEARING AND DISTANCES ARE BASED ON THE CITY OF SCOTTSDALE GPS SURVEY OF SEPTEMBER, 1991. BEARINGS ARE NAD 83 GRID AND DISTANCES ARE FLATTENED TO GROUND. WHERE NO CORNER WAS FOUND THE DIMENSIONS ARE GIVEN TO CALCULATED SECTION CORNERS AND ARE NOTED AS "CALCULATED" ON THE MAP.
- LEGEND:**
- Water Valve
  - Non-potable Water Valve
  - Fire Hydrant
  - Water Blowoff
  - Water Main Reducer
  - Water Sample Station
  - Water Air Release Valve
  - Non-potable Water Air Release Valve
  - Water Pressure Reducing Valve
  - Water Vault
  - Water Manhole
  - Non-Potable Water Manhole
  - Water Pump
  - Water Main
  - Non-Potable Water Main
  - Fire Line
  - Water Service
  - Non-Scottsdale Water Main
  - Sewer Manhole
  - Sewer Cleanout
  - Sewer Lift Station
  - Sewer Treatment Plant
  - Sewer Main - Gravity
  - Sewer Main - Force
  - Non-Scottsdale Sewer Main
  - Sewer Service



**WATER & SEWER**

QUARTER SECTION MAP

**29-44**

SE 1/4 SEC. 22 T3N R4E

**NOTICE**

THIS DOCUMENT IS PROVIDED FOR GENERAL INFORMATION PURPOSES ONLY. THE CITY OF SCOTTSDALE DOES NOT WARRANT ITS ACCURACY, COMPLETENESS, OR SUITABILITY FOR ANY PARTICULAR PURPOSE. IT SHOULD NOT BE RELIED UPON WITHOUT FIELD VERIFICATION.

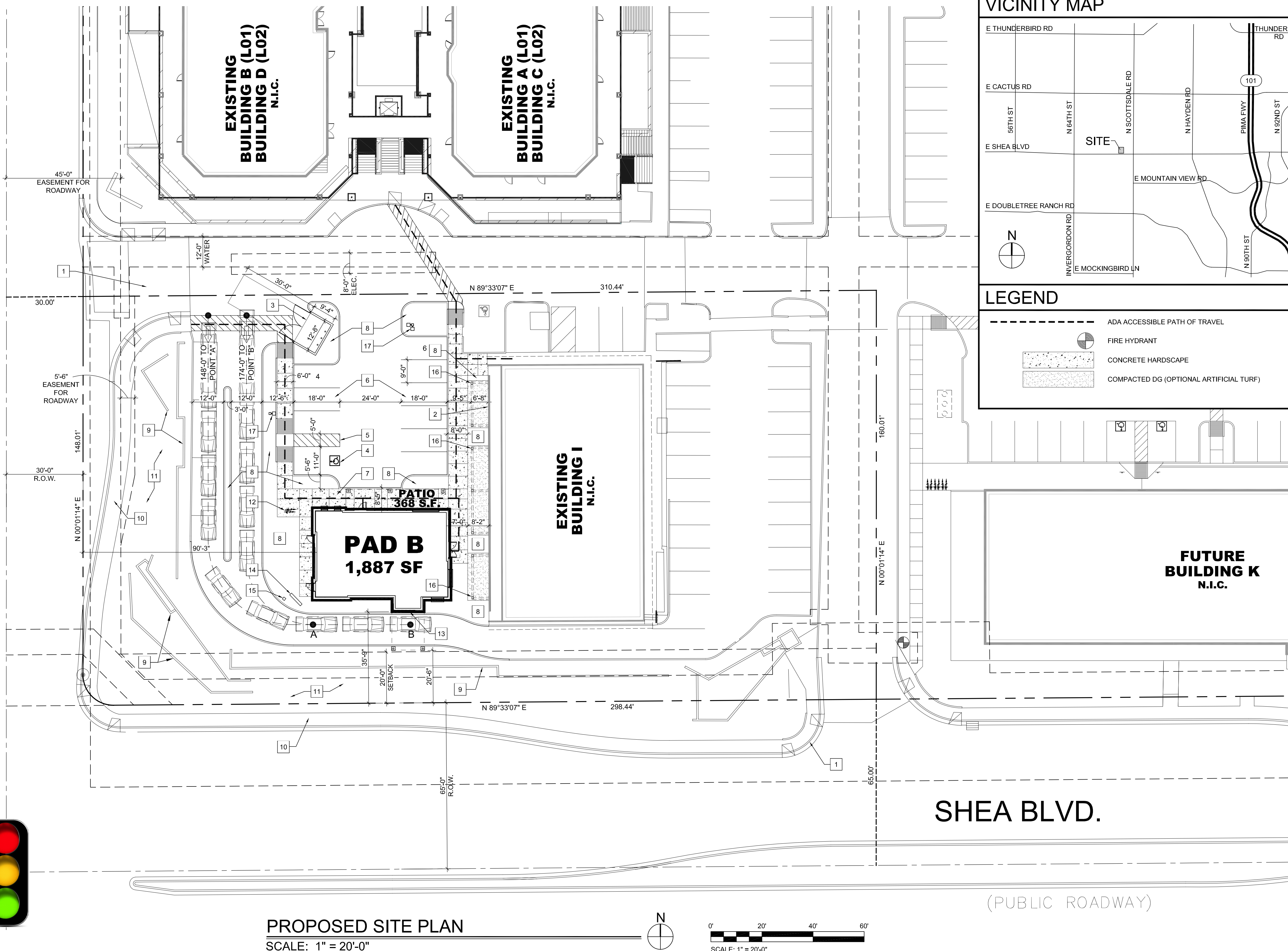
06-OCT-19



Appendix B  
Preliminary Site Plan

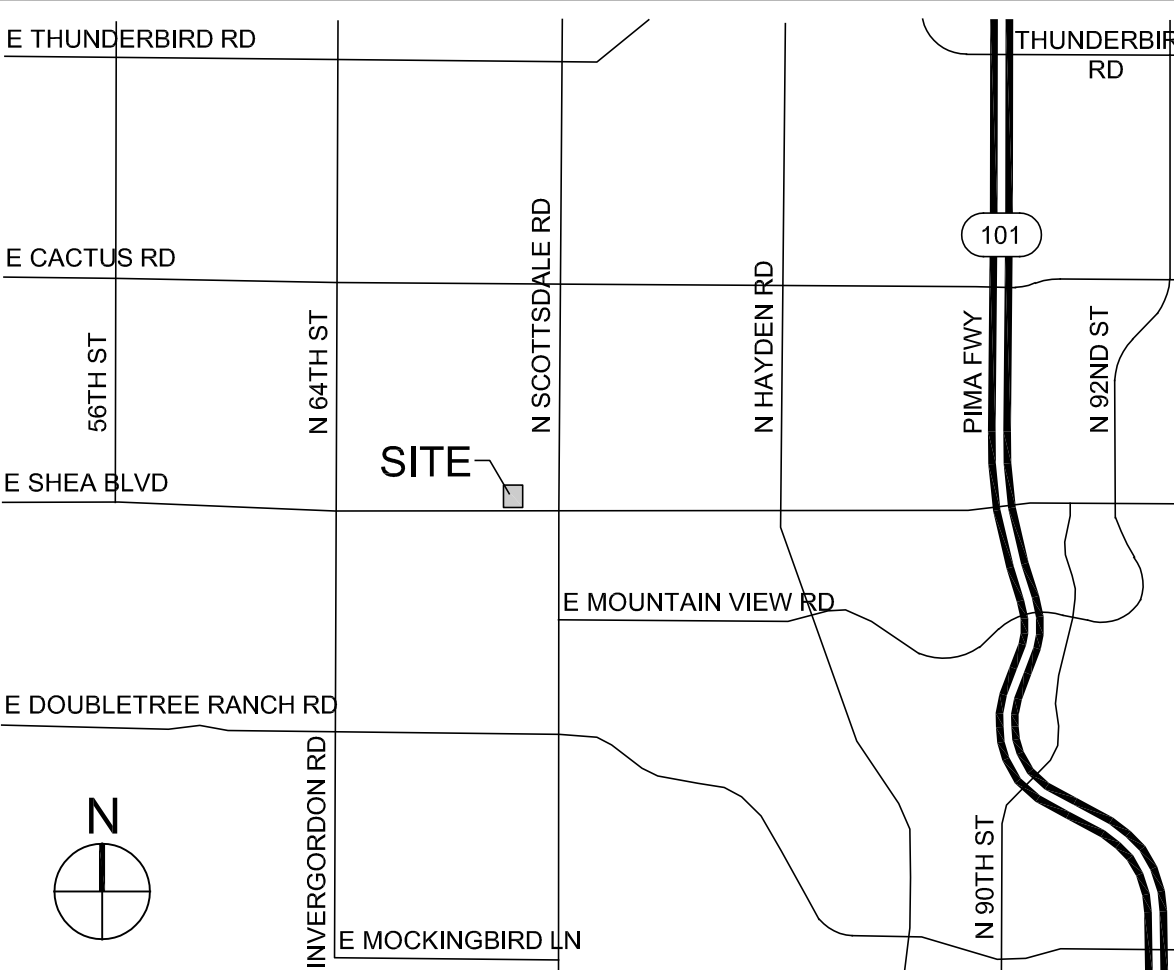
A.P.N. 175-41-019 (C-2)

70TH STREET

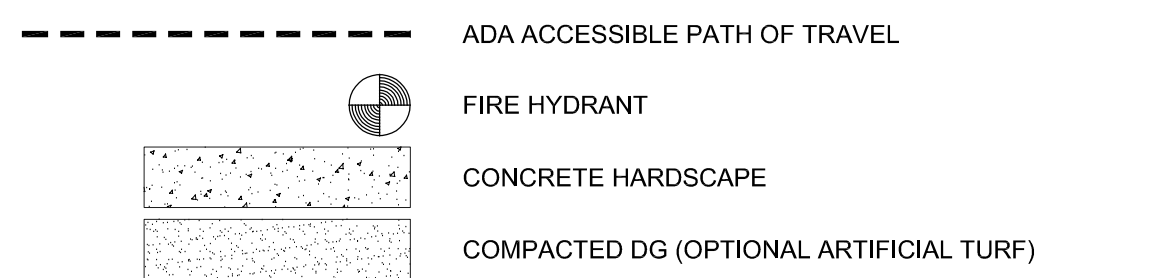


PROPOSED SITE PLAN  
SCALE: 1" = 20'-0"

VICINITY MAP



LEGEND



PROJECT DESCRIPTION

THIS SUBMITTAL CONTAINS INFORMATION FOR A NEW SINGLE-STORY 1,887 SF COFFEE SHOP WITH DOUBLE DRIVE-THRU IN A REDEVELOPED FORMER SHOPPING CENTER ALONG WITH PARKING LOT IMPROVEMENTS LOCATED AT THE NORTHEAST CORNER OF 70TH STREET AND SHEA BOULEVARD.

SITE DATA

PARCEL NUMBER(S):	175-42-136Q & 175-42-136P, 175-42-136N & 175-42-136H
EXISTING ZONING CLASSIFICATION:	C-2, CENTRAL BUSINESS
NET SITE AREA:	46,643 S.F. (1.071 AC)
GROSS SITE AREA:	49,639 S.F. (1.140 AC)
PROPOSED CONSTRUCTION TYPE:	VB W/ A.F.E.S.
PROPOSED USES:	RESTAURANT
PROPOSED GROSS BUILDING AREA:	1,877 S.F.
BUILDING HEIGHT ALLOWED:	36'-0"
BUILDING HEIGHT PROPOSED:	28'-4"
PARKING REQUIRED:	
RESTAURANTS:	
A. ONE (1) PARKING SPACE PER ONE HUNDRED TWENTY (120) SQUARE FEET OF GROSS FLOOR AREA	1,887 S.F. / 120 = 15.725 SPACE
B. ONE (1) PARKING SPACE FOR EACH THREE HUNDRED FIFTY (350) GROSS SQUARE FEET OF OUTDOOR PATIO AREA, EXCLUDING THE FIRST THREE HUNDRED FIFTY (350) GROSS SQUARE FEET OF OUTDOOR PATIO AREA, UNLESS THE SPACE IS LOCATED NEXT TO AND ORIENTED TOWARD A PUBLICLY OWNED WALKWAY OR STREET, IN WHICH CASE THE FIRST FIVE HUNDRED (500) SQUARE FEET OF OUTDOOR PATIO AREA IS EXCLUDED.	368 SF PATIO AREA = 1 SPACE
TOTAL PARKING REQUIRED:	17 SPACES
PARKING PROVIDED:	
TOTAL PARKING PROVIDED:	10 SPACES
TOTAL QUEUE LENGTH PROVIDED :	322'

SITE PLAN KEY NOTE TAGS

- # = KEY NOTE TAG
- EXISTING DRIVE ENTRANCE
  - EXISTING MASONRY BUILDING WALL TO REMAIN
  - PROPOSED REFUSE ENCLOSURE PER CITY OF SCOTTSDALE DETAIL NO. 2146-1
  - PROPOSED ADA PARKING STALL (11'-0"x18'-0" TYP.)
  - PROPOSED ADA ACCESS AISLE (5'-0"x18'-0" TYP.)
  - PROPOSED STANDARD PARKING STALL (9'-0"x18'-0" TYP.)
  - PROPOSED HARDSCAPE AREA
  - PROPOSED LANDSCAPED AREA
  - EXISTING SCREEN WALL WITH STUCCO FINISH
  - EXISTING SIDEWALK
  - EXISTING LANDSCAPE AREA
  - PROPOSED BIKE RACK
  - PROPOSED DRIVE THRU WINDOW
  - PROPOSED MENU BOARD
  - PROPOSED SPEAKER BOX
  - PROPOSED TRELLIS FEATURE
  - PROPOSED SITE LIGHT FIXTURE

PROJECT TEAM

ARCHITECT	OWNER
VERTICAL DESIGN STUDIOS, LLC. 4650 EAST COTTON CENTER BLVD, SUITE 140 PHOENIX, ARIZONA 85040 PHONE: 602.393.5224 FAX: 602.395.1005 E-MAIL: jgregonis@verticaldesignstudios.com CONTACT: Justin Gregonis	DPC COMPANIES 7800 EAST UNION AVE, SUITE 800 DENVER, COLORADO 80237 PHONE: 303.796.8288 FAX: E-MAIL: jlutgen@dpccompanies.com CONTACT: Justin Lutgen

APPROVAL STAMPS

APN: 175-42-136Q & 175-42-136P, 175-42-136N & 175-42-136H



**BLACK ROCK COFFEE BAR**  
7000 EAST SHEA BOULEVARD  
SCOTTSDALE, ARIZONA  
08.10.2020  
PROJECT 19079.00



4650 E. Cotton Center Boulevard Phoenix, AZ 85040  
602.395.1000 www.verticaldesignstudios.com

30-PR-2020  
10/5/2020

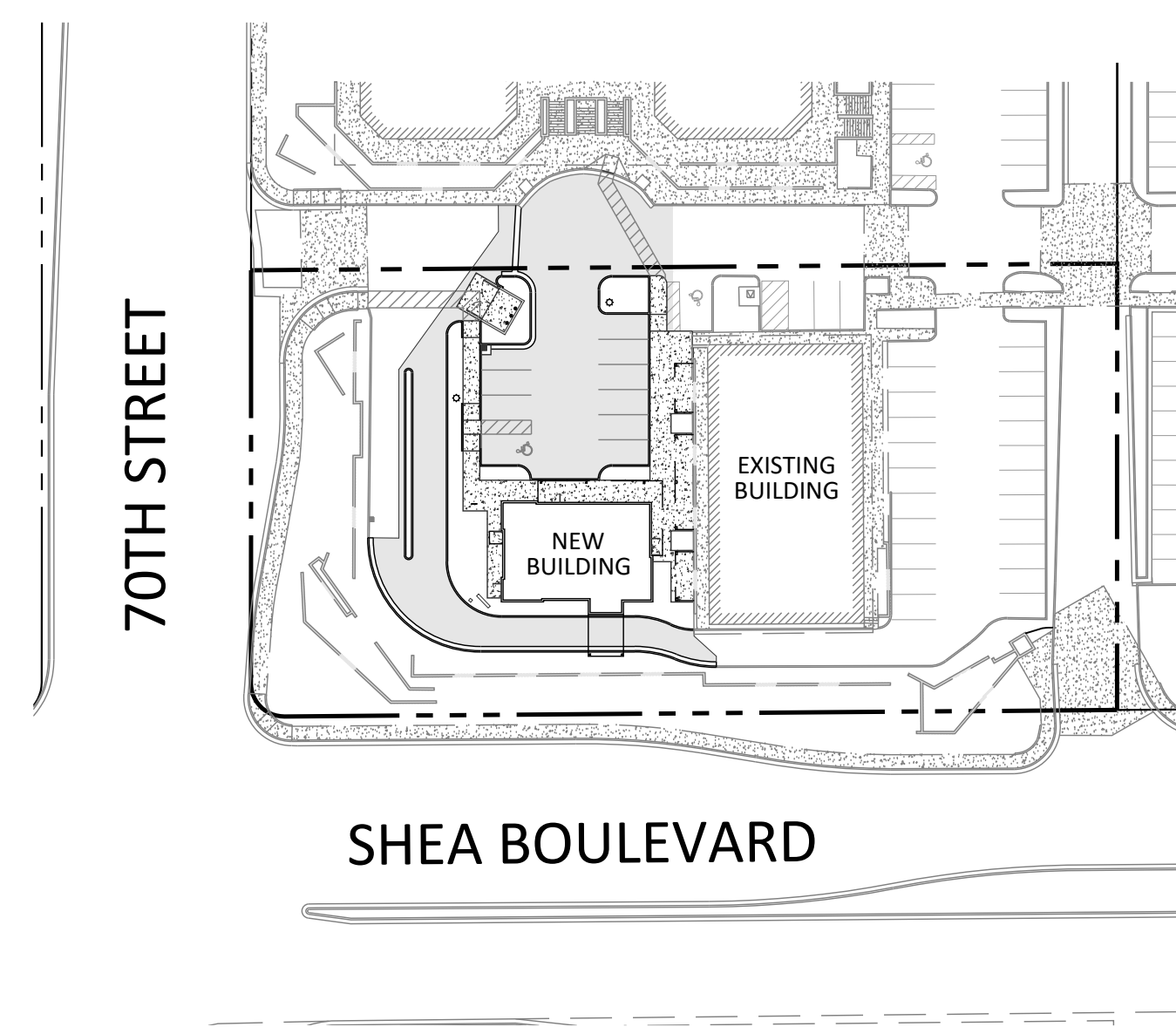
# Appendix C

## Preliminary Improvement Plan

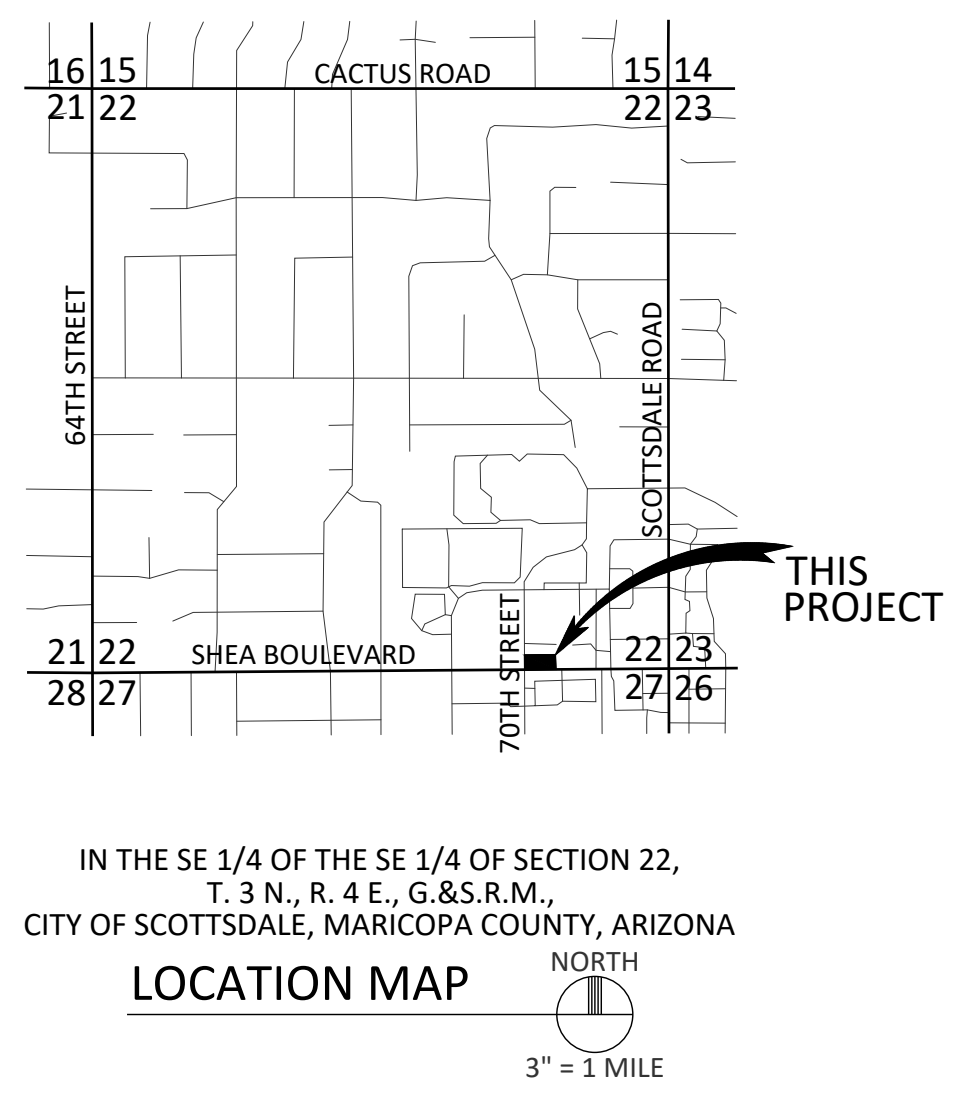


# PRELIMINARY IMPROVEMENT PLAN for BLACK ROCK COFFEE - 7000 EAST SHEA

7000 EAST SHEA BOULEVARD SCOTTSDALE, ARIZONA  
A PORTION SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE  
GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



PROJECT OVERVIEW



CYPRESS  
CIVIL



4450 north 12th street  
suite 228  
phoenix, arizona 85014  
p: 623.282.2498  
e: jphunt@cypresscivil.com

NO.	DATE	REVISION

## PROJECT INFORMATION

PROJECT DESCRIPTION:  
THE PROJECT CONSISTS OF THE DEMOLITION OF AN EXISTING BUILDING AND THE CONSTRUCTION OF A NEW SINGLE-STORY DRIVE-THRU COFFEE SHOP WITH ALL REQUIRED GRADING & DRAINAGE, PARKING, UTILITY AND PAVING IMPROVEMENTS.

ADDRESS:  
7000 EAST SHEA BOULEVARD  
SCOTTSDALE, ARIZONA 85254

APN: 175-42-136N

ZONING: C-2

SITE AREA: 46,643 SF (1.07 AC)

## SURVEY NOTES

1. THE SURVEY FOR THIS PROJECT WAS PERFORMED BY:  
SUPERIOR SURVEYING SERVICES, INC.  
2122 WEST LONE CACTUS DRIVE, SUITE 11  
PHOENIX, ARIZONA 85027  
PH: 623-869-0223  
CONTACT: DAVID S. KLEIN, R.L.S.
2. THE BASIS OF BEARINGS FOR THIS PROJECT IS THE MONUMENT LINE OF SHEA BOULEVARD, ALSO BEING THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 22, USING A BEARING OF NORTH 89°33'07" EAST, AS PER THE RECORD OF SURVEY IN BOOK 1366, PAGE 41, RECORDS OF MARICOPA COUNTY, ARIZONA.
3. THE BASIS OF ELEVATION FOR THIS PROJECT IS THE CITY OF SCOTTSDALE BENCHMARK ID: 3272, BEING A 3" CITY OF SCOTTSDALE BRASS CAP IN HANDHOLE, LOCATED AT THE INTERSECTION OF SHEA BOULEVARD & SCOTTSDALE ROAD, HAVING AN ELEVATION OF 1351.26', (NAVD88).

## BENCHMARK

THE BENCHMARK USED FOR THIS PLAN IS THE CITY OF SCOTTSDALE BENCHMARK ID: 3272, BEING A 3" CITY OF SCOTTSDALE BRASS CAP IN HANDHOLE, LOCATED AT THE INTERSECTION OF SHEA BOULEVARD & SCOTTSDALE ROAD, HAVING AN ELEVATION OF 1351.26', (NAVD88).

## LEGAL DESCRIPTION

THE NORTH 160.00 FEET OF THE SOUTH 225.00 FEET OF THE WEST HALF OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA;  
EXCEPT THE EAST 320.00 FEET; AND  
EXCEPT THE WEST 30.00 FEET; AND  
EXCEPT BEGINNING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 30.00 FEET OF SAID WEST HALF WITH THE NORTH LINE OF THE SOUTH 65.00 FEET OF SAID WEST HALF;  
THENCE NORTHERLY ALONG SAID EAST LINE, 12.00 FEET TO THE BEGINNING OF A TANGENT CURVE NORTHEASTERLY;  
THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE TO A POINT OF TANGENCY IN SAID NORTH LINE, SAID POINT BEARS 12.00 FEET EASTERLY FROM THE POINT OF BEGINNING;  
THENCE WESTERLY ALONG SAID NORTH LINE, 12.00 FEET TO THE POINT OF BEGINNING.

## FLOODPLAIN INFORMATION

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP PANEL NUMBER 04013C1760L, DATED OCTOBER 16, 2013 THE PARCEL IS LOCATED IN THE ZONE X (SHADED) AREA, WHICH IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

## DRAINAGE STATEMENT

-SITE IS IN A SPECIAL FLOOD HAZARD AREA - NO  
-OFFSITE FLOWS AFFECT THIS SITE - NO  
-EXTREME STORM OUTFALLS THE SITE AT THE NORTHWEST CORNER AT THE ELEVATION OF 1353.86.

## OWNER/DEVELOPER

DPC COMPANIES  
7800 EAST UNION AVENUE, #800  
DENVER, COLORADO 80237  
PH: 303-796-8288  
ATTN: JUSTIN LUTGEN

## CIVIL ENGINEER

CYPRESS CIVIL DEVELOPMENT  
4450 NORTH 12TH STREET, #228  
PHOENIX, ARIZONA 85014  
PH: 623-282-2498  
ATTN: JEFF HUNT, PE

## ARCHITECT

VERTICAL DESIGN STUDIOS  
4650 EAST COTTON CENTER BOULEVARD  
SUITE 140  
PHOENIX, ARIZONA 85040  
PH: 602-395-1000  
ATTN: JUSTIN GREGONIS

## UTILITIES

WATER:	CITY OF SCOTTSDALE
SEWER:	CITY OF SCOTTSDALE
ELECTRIC:	ARIZONA PUBLIC SERVICE
GAS:	SOUTHWEST GAS
TELEPHONE:	CENTURYLINK
CABLE:	COX COMMUNICATIONS

## SHEET INDEX

1. COVER SHEET
2. GRADING AND DRAINAGE PLAN
3. ONSITE UTILITY PLAN

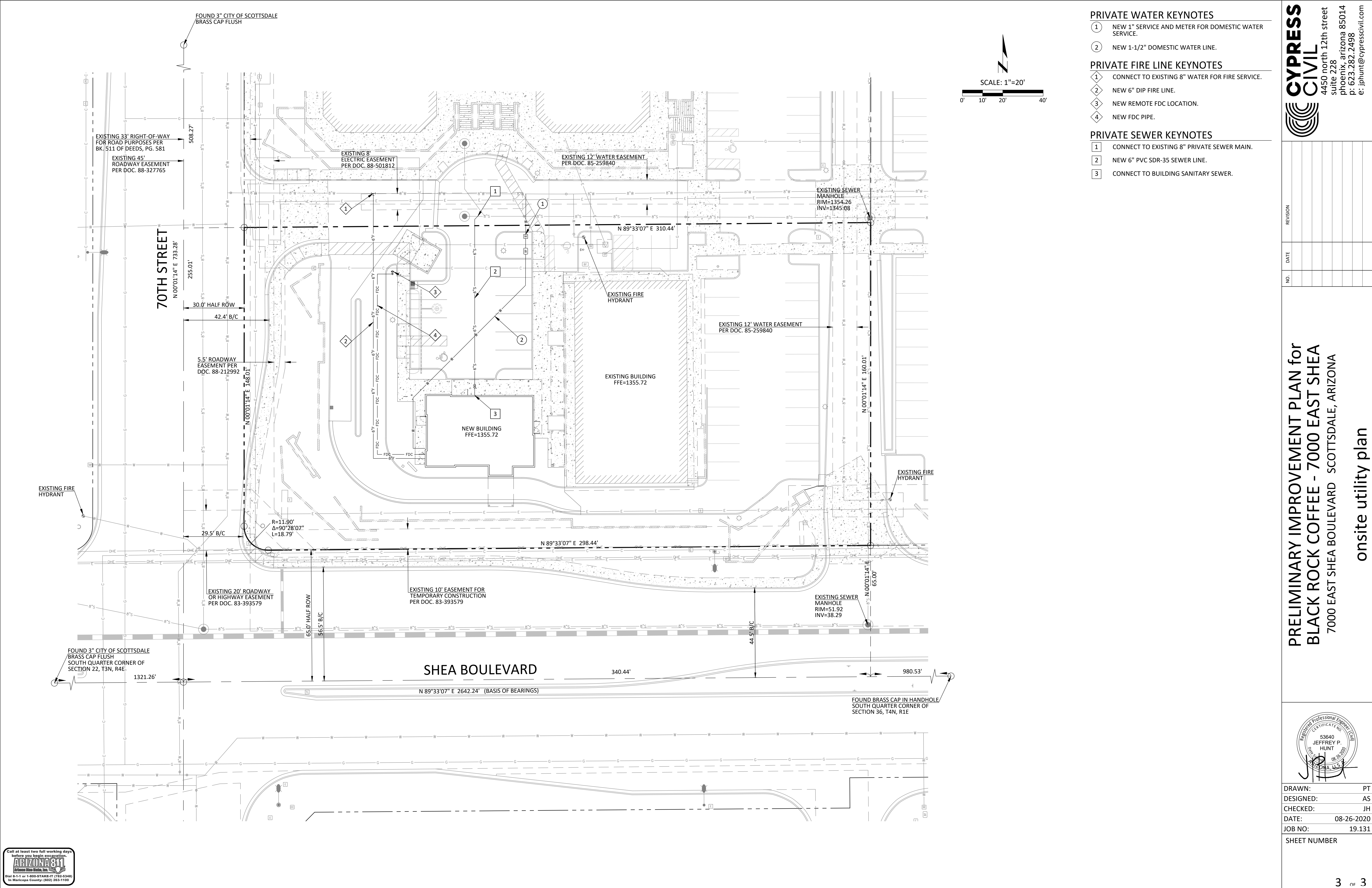
PRELIMINARY IMPROVEMENT PLAN for  
BLACK ROCK COFFEE - 7000 EAST SHEA  
7000 EAST SHEA BOULEVARD SCOTTSDALE, ARIZONA

cover

DRAWN:	PT
DESIGNED:	AS
CHECKED:	JH
DATE:	08-26-2020
JOB NO:	19.131
SHEET NUMBER	







THESE PLANS PRELIMINARY AND ARE NOT FOR CONSTRUCTION OR RECORDING

CYPRESS  
CIVIL

4450 north 12th street  
suite 228  
phoenix, arizona 85014  
p: 623.282.2498  
e: jphunt@cypresscivil.com

REVISION

DATE

NO.

PRELIMINARY IMPROVEMENT PLAN for  
BLACK ROCK COFFEE - 7000 EAST SHEA  
7000 EAST SHEA BOULEVARD SCOTTSDALE, ARIZONA

onsite utility plan

Registered Professional Engineer  
CERTIFICATE NO.  
53640  
JEFFREY P.  
HUNT  
08-26-2020  
ARIZONA, U.S.A.

DRAWN: PT

DESIGNED: AS

CHECKED: JH

DATE: 08-26-2020

JOB NO: 19.131

SHEET NUMBER

3 of 3  
30-DR-2020  
10/5/2020

# PRELIMINARY WATER BASIS OF DESIGN REPORT FOR BLACK ROCK COFFEE – 7000 EAST SHEA

Scottsdale, Arizona

24 November, 2020

## PRELIMINARY Basis of Design Report

☒ **ACCEPTED**

☐ **ACCEPTED AS NOTED**

☐ **REVISE AND RESUBMIT**



Disclaimer: If accepted; the preliminary approval is granted under the condition that a final basis of design report will also be submitted for city review and approval (typically during the DR or PP case). The final report shall incorporate further water or sewer design and analysis requirements as defined in the city design standards and policy manual and address those items noted in the preliminary review comments (both separate and included herein). The final report shall be submitted and approved prior to the plan review submission.

For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

**BY** rsacks

**DATE** 12/21/2020

## PREPARED FOR

Vertical Design Studios  
4650 East Cotton Center Boulevard  
Phoenix, Arizona 85040

## DEVELOPER

SimonCRE  
6900 East 2nd Street  
Scottsdale, Arizona 85251

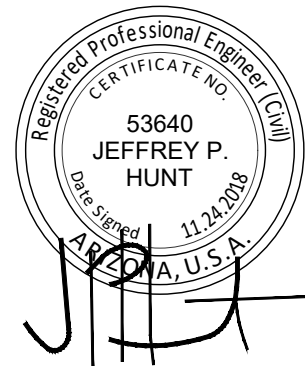
## SITE ADDRESS

7000 East Shea Boulevard  
Scottsdale, Arizona 85254

## PREPARED BY



4450 north 12<sup>th</sup> street, #228  
phoenix, arizona 85014  
CYPRESS # 19.131





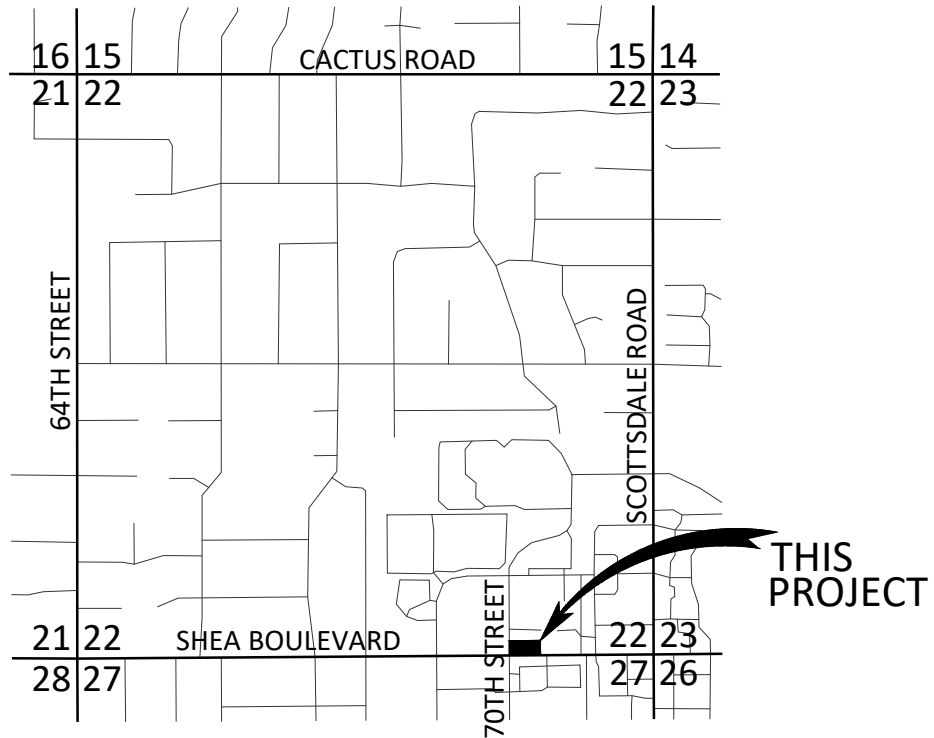
## TABLE OF CONTENTS

---

LOCATION MAP	1
INTRODUCTION	2
EXISTING CONDITIONS	2
PROPOSED CONDITIONS	2
REQUIRED COMPUTATIONS	3
CONCLUSION	4

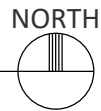
### APPENDICES

- A City of Scottsdale Water Quarter Section Map
- B Preliminary Site Plan
- C Preliminary Improvement Plan
- D Fire Flow Test Results



IN THE SE 1/4 OF THE SE 1/4 OF SECTION 22,  
T. 3 N., R. 4 E., G.&S.R.M.,  
CITY OF SCOTTSDALE, MARICOPA COUNTY, ARIZONA

LOCATION MAP



## **INTRODUCTION: PROJECT DESCRIPTION AND LOCATION**

The Project is known as 'Black Rock Coffee - 7000 East Shea' and is located at 7000 East Shea Boulevard in Scottsdale, Arizona. The Project is located at the northeast corner of Shea Boulevard and 70<sup>th</sup> Street and lies within the existing Scottsdale Promenade shopping center.

The proposed Project consists of redevelopment of the parcel by removing an existing restaurant building and replacing it with a new drive-thru coffee building with associated paved access, parking, utility, and drainage improvements.

The utility provider for water facilities is the City of Scottsdale.

## **EXISTING CONDITIONS**

Per available utility maps and as-built records, an existing 8" DIP water main is located in the private drive aisle north of the Project. There is an existing offsite hydrant just northeast of the Project that provides the required fire coverage for the existing building. Refer to Appendix A for City of Scottsdale Water Quarter Section Map showing stub locations and sizes.

No recent fire flow tests have been conducted at the time of this report. The required fire flow available at 20 PSI must be a minimum of 1,500 GPM. It is assumed that the existing line shall provide this, as it serves numerous larger existing buildings.

## **PROPOSED CONDITIONS**

The Project shall tap the existing 8" water main to the north and install a new 1-1/2-inch service, meter, and backflow preventer for domestic and install a separate existing meter and backflow preventer for landscape irrigation. The Project shall also connect a new 6-inch fire line to the existing 8-inch water main north of the Project. All water facilities are designed in accordance with Arizona Department of Environmental Quality (ADEQ), the International Plumbing Code, and City of Scottsdale Water and Wastewater Design Standards and Specifications.

Per the International Fire Code, Table C102.1, the Project requires 1 fire hydrant to meet the minimum spacing requirements and building coverage. The existing offsite hydrant at the northeast corner meets this requirement. Refer to Appendix C for Preliminary Site Plan and Appendix D for Preliminary Improvement Plans.



## **REQUIRED COMPUTATIONS**

### **PROPOSED WATER DEMAND**

As previously stated, the domestic water distribution shall consist of a 1-1/2-inch meter and backflow preventer and 1-1/2" water distribution line. The table below lists the domestic water demands for the building:

TYPE	QUANTITY	WFSU/FIXTURE	TOTAL WFSU
WATER CLOSET (TANK)	2	5	10
LAVATORY	4	2	8
JANITOR'S SINK	1	4	4
HAND SINK	8	2	16
BEVERAGE FAUCETS	14	1	14
DOUBLE SINK	4	3	12
TRIPLE SINK	1	4	4
		<b>TOTAL</b>	<b>68</b>

The project is designed to have a water supply fixture unit count of 68 which converts to approximately 31.2 GPM. Conservative estimates of the available pressure would ensure that a minimum of 40 PSI is available at the service connection. The project has approximately 150 linear feet of 1-1/2-inch distribution pipe. Per the International Plumbing Code, Table E201.1, the maximum WFSU based on the above parameters and a 1-1/2 inch meter and 1-1/2" distribution line is 151; thus the expected maximum 68 WFSU is acceptable. Further, per City of Scottsdale DPSM Chapter 6, Figure 6-1.4, safe maximum capacity of a 1-1/2 inch meter is 100 GPM and recommended maximum capacity is 50 GPM; thus the expected 31.2 GPM is acceptable.

**Average Day Demand (Restaurant):**  $0.00181/\text{SF} \times 1,887 \text{ SF} = 3.42 \text{ GPM}$

**Peak Hour Demand:**  $3.5 \times 3.42 = 11.97 \text{ GPM}$

**Maximum Day Demand + Fire Flow Demand:**  $2 \times (11.97 \text{ GPM}) + 1,500 \text{ GPM} = 1,513.94 \text{ GPM}$

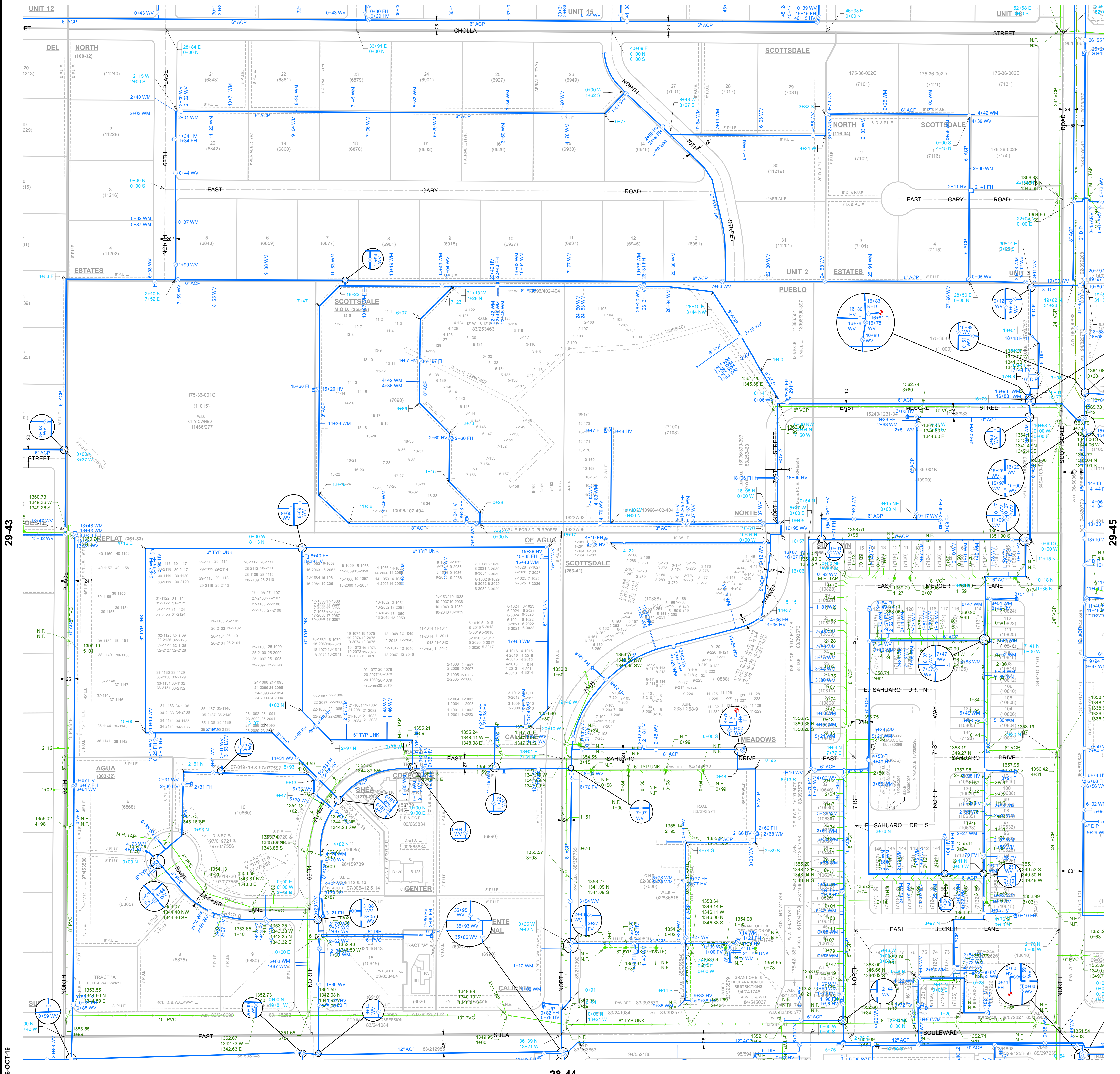
The proposed building will be approximately 1,887 square feet and is construction type V-B. Per the International Fire Code, Table B105.1, it requires a minimum fire flow of 1,500 GPM for a 2-hour duration. The new building will have automatic sprinklers installed resulting in an allowable 75% reduction in fire flow requirements, but cannot be less than 1,500 GPM. Therefore, required fire flow will be 1,500 GPM for a 2-hour duration. The project is designed with a 6-inch fire line to provide the building with automatic fire suppression water. A fire flow test was performed on August 31, 2020, and it shows an available flow of 4,336 GPM at 20 PSI. Thus, the fire flow is sufficient to serve the new building suppression system. Refer to Appendix E for Fire Flow Test Results.

**CONCLUSION**

CYPRESS respectfully submits this report as the Preliminary Water Design Report for the proposed Black Rock Coffee – 7000 East Shea Development. The proposed water system shall be designed in accordance with ADEQ, International Building Code, and the City of Scottsdale standards.

Appendix A  
City of Scottsdale Water Quarter Section Map





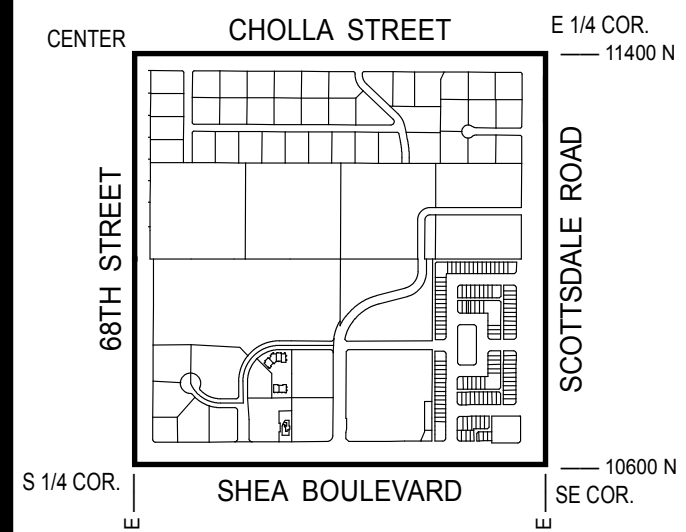
GENERAL NOTES:  
• THIS IS A COMPUTER GENERATED DRAWING. FOR ANY REVISIONS PLEASE CONTACT THE CITY OF SCOTTSDALE GIS DEPARTMENT AT (480) 312-7792.

THE SECTION LINE BEARING AND DISTANCES ARE BASED ON THE CITY OF SCOTTSDALE GPS SURVEY OF SEPTEMBER, 1991. BEARINGS ARE NAD 83 GRID AND DISTANCES ARE FLATTENED TO GROUND. WHERE NO CORNER WAS FOUND THE DIMENSIONS ARE GIVEN TO CALCULATED SECTION CORNERS AND ARE NOTED AS "CALCULATED" ON THE MAP.

LEGEND:

- Water Valve
- Non-potable Water Valve
- Fire Hydrant
- Water Blowoff
- Water Main Reducer
- Water Sample Station
- Water Air Release Valve
- Non-potable Water Air Release Valve
- Water Pressure Reducing Valve
- Water Vault
- Water Manhole
- Non-Potable Water Manhole
- Water Pump
- Water Main
- Non-Potable Water Main
- Fire Line
- Water Service
- Non-Scottsdale Water Main
- Sewer Manhole
- Sewer Cleanout
- Sewer Lift Station
- Sewer Treatment Plant
- Sewer Main - Gravity
- Sewer Main - Force
- Non-Scottsdale Sewer Main
- Sewer Service

VICINITY MAP



NORTH

SCALE: 1" = 100'

The map scale of 1" = 100' is based on a full size print of 30" x 36"

WATER & SEWER  
QUARTER SECTION MAP

29-44

SE 1/4 SEC. 22 T3N R4E

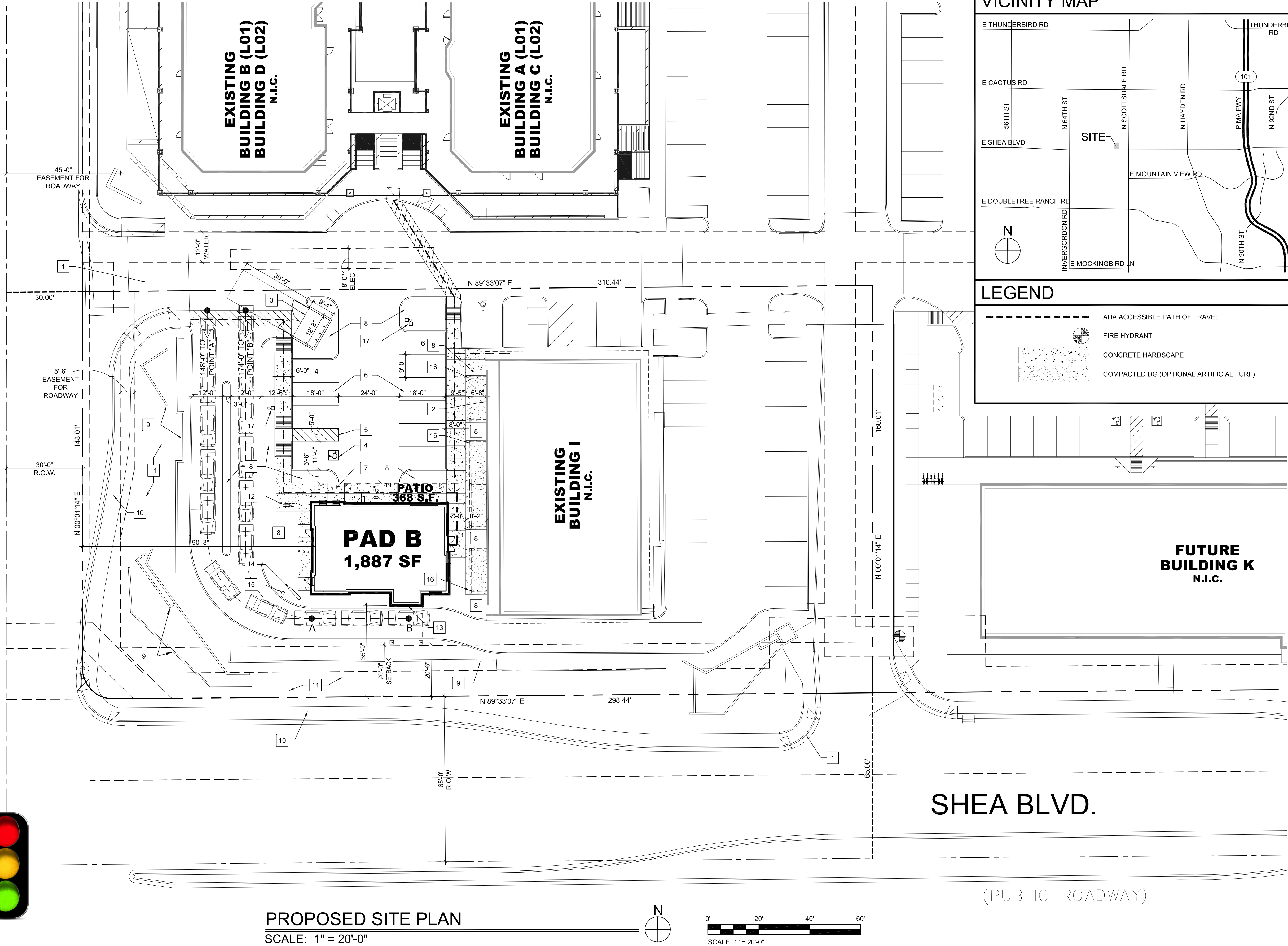
NOTICE  
THIS DOCUMENT IS PROVIDED FOR GENERAL INFORMATION PURPOSES ONLY. THE CITY OF SCOTTSDALE DOES NOT WARRANT ITS ACCURACY, COMPLETENESS OR SUITABILITY FOR ANY PARTICULAR PURPOSE. IT SHOULD NOT BE RELIED UPON WITHOUT FIELD VERIFICATION.



Appendix B  
Preliminary Site Plan

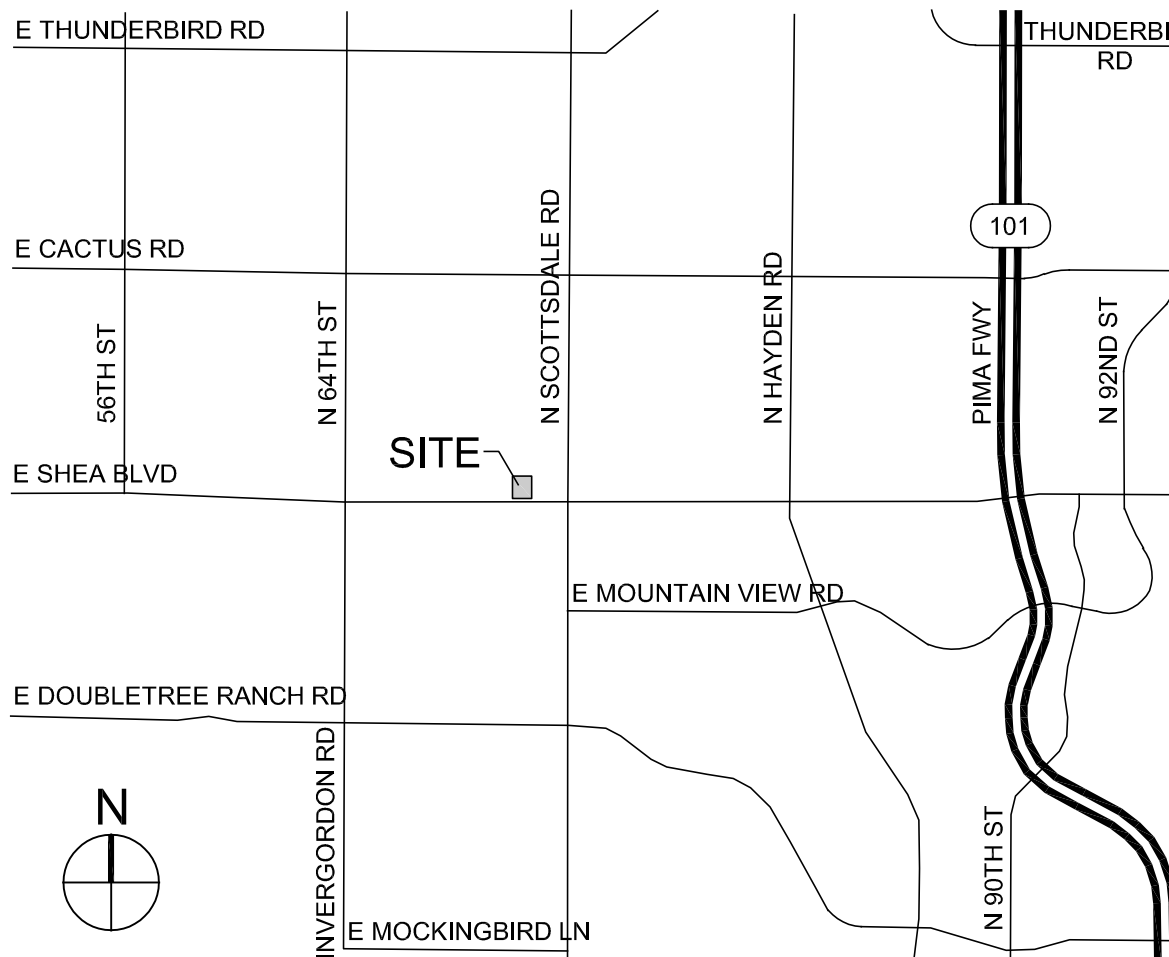
A.P.N. 175-41-019 (C-2)

70TH STREET



PROPOSED SITE PLAN  
SCALE: 1" = 20'-0"

VICINITY MAP



LEGEND

- ADA ACCESSIBLE PATH OF TRAVEL
- FIRE HYDRANT
- CONCRETE HARDSCAPE
- COMPACTED DG (OPTIONAL ARTIFICIAL TURF)

PROJECT DESCRIPTION

THIS SUBMITTAL CONTAINS INFORMATION FOR A NEW SINGLE-STORY 1,887 SF COFFEE SHOP WITH DOUBLE DRIVE-THRU IN A REDEVELOPED FORMER SHOPPING CENTER ALONG WITH PARKING LOT IMPROVEMENTS LOCATED AT THE NORTHEAST CORNER OF 70TH STREET AND SHEA BOULEVARD.

SITE DATA

PARCEL NUMBER(S): 175-42-136Q & 175-42-136P, 175-42-136N & 175-42-136H  
EXISTING ZONING CLASSIFICATION: C-2, CENTRAL BUSINESS  
NET SITE AREA: 46,643 S.F. (1.071 AC)  
GROSS SITE AREA: 49,639 S.F. (1.140 AC)  
PROPOSED CONSTRUCTION TYPE: VB W/ A.F.E.S.  
PROPOSED USES: RESTAURANT  
PROPOSED GROSS BUILDING AREA: 1,877 S.F.  
BUILDING HEIGHT ALLOWED: 36'-0"  
BUILDING HEIGHT PROPOSED: 28'-4"  
PARKING REQUIRED:  
RESTAURANTS:  
A. ONE (1) PARKING SPACE PER ONE HUNDRED TWENTY (120) SQUARE FEET OF GROSS FLOOR AREA  
1,887 S.F. / 120 = 15.725 SPACE  
B. ONE (1) PARKING SPACE FOR EACH THREE HUNDRED FIFTY (350) GROSS SQUARE FEET OF OUTDOOR PATIO AREA, EXCLUDING THE FIRST THREE HUNDRED FIFTY (350) GROSS SQUARE FEET OF OUTDOOR PATIO AREA, UNLESS THE SPACE IS LOCATED NEXT TO AND ORIENTED TOWARD A PUBLICLY OWNED WALKWAY OR STREET, IN WHICH CASE THE FIRST FIVE HUNDRED (500) SQUARE FEET OF OUTDOOR PATIO AREA IS EXCLUDED.  
368 SF PATIO AREA = 1 SPACE

TOTAL PARKING REQUIRED: 17 SPACES  
PARKING PROVIDED:  
TOTAL PARKING PROVIDED: 10 SPACES  
TOTAL QUEUE LENGTH PROVIDED: 322'

SITE PLAN KEY NOTE TAGS

- # = KEY NOTE TAG
- EXISTING DRIVE ENTRANCE
  - EXISTING MASONRY BUILDING WALL TO REMAIN
  - PROPOSED REFUSE ENCLOSURE PER CITY OF SCOTTSDALE DETAIL NO. 2146-1
  - PROPOSED ADA PARKING STALL (11'-0"x18'-0" TYP.)
  - PROPOSED ADA ACCESS AISLE (5'-0"x18'-0" TYP.)
  - PROPOSED STANDARD PARKING STALL (9'-0"x18'-0" TYP.)
  - PROPOSED HARDSCAPE AREA
  - PROPOSED LANDSCAPED AREA
  - EXISTING SCREEN WALL WITH STUCCO FINISH
  - EXISTING SIDEWALK
  - EXISTING LANDSCAPE AREA
  - PROPOSED BIKE RACK
  - PROPOSED DRIVE THRU WINDOW
  - PROPOSED MENU BOARD
  - PROPOSED SPEAKER BOX
  - PROPOSED TRELLIS FEATURE
  - PROPOSED SITE LIGHT FIXTURE

PROJECT TEAM

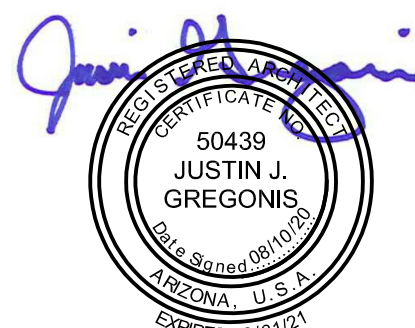
ARCHITECT	OWNER
VERTICAL DESIGN STUDIOS, LLC.	DPC COMPANIES
4650 EAST COTTON CENTER BLVD, SUITE 140	7800 EAST UNION AVE, SUITE 800
PHOENIX, ARIZONA 85040	DENVER, COLORADO 80237
PHONE: 602.393.5224	PHONE: 303.796.8288
FAX: 602.395.1005	FAX:
E-MAIL: jgregonis@verticaldesignstudios.com	E-MAIL: jlutgen@dpccompanies.com
CONTACT: Justin Gregonis	CONTACT: Justin Lutgen

APPROVAL STAMPS

APN: 175-42-136Q & 175-42-136P, 175-42-136N & 175-42-136H



BLACK ROCK COFFEE BAR  
7000 EAST SHEA BOULEVARD  
SCOTTSDALE, ARIZONA  
08.10.2020  
PROJECT 19079.00



4650 E. Cotton Center Boulevard Phoenix, AZ 85040  
602.395.1000 www.verticaldesignstudios.com

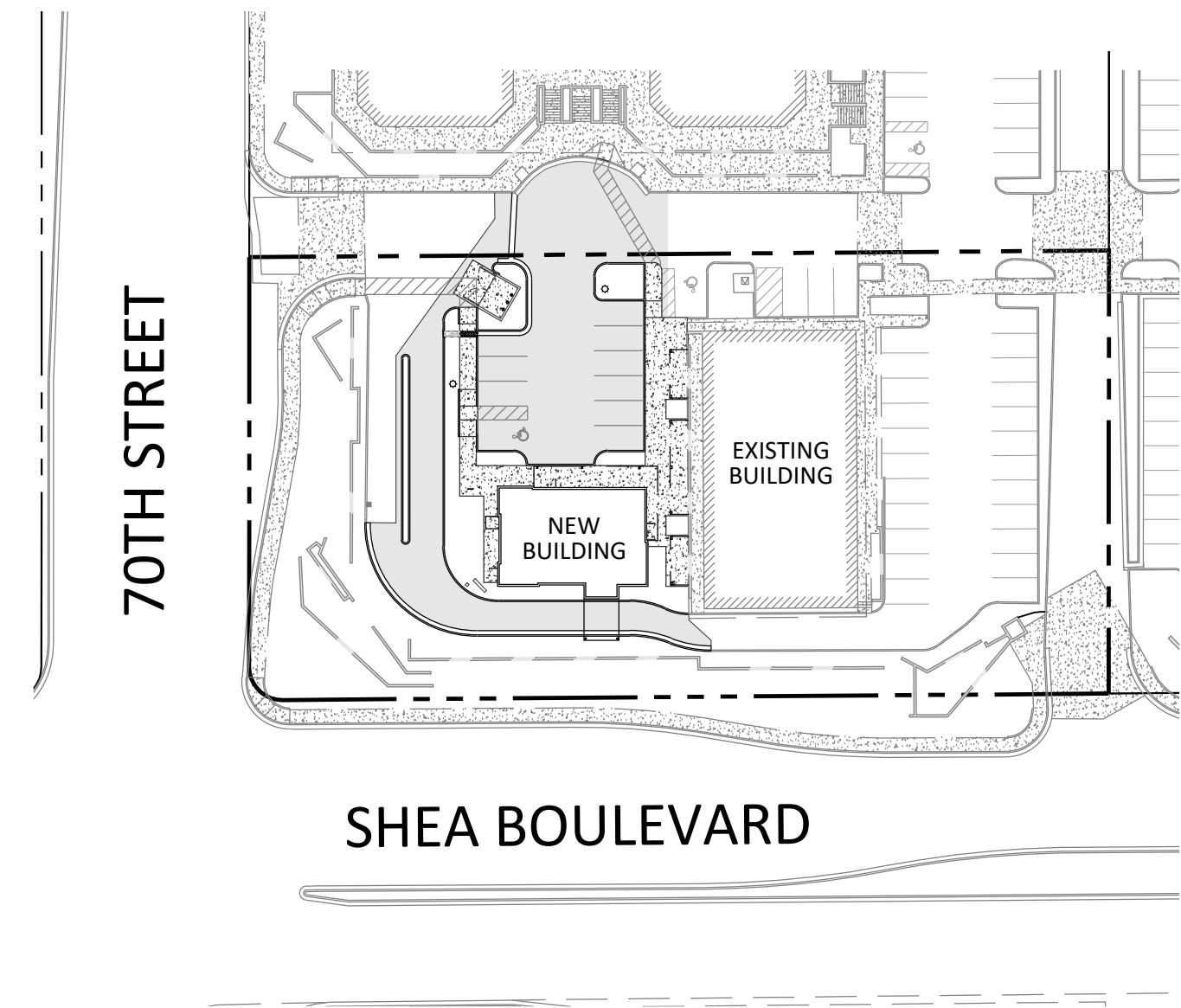
## Appendix C

### Preliminary Improvement Plan

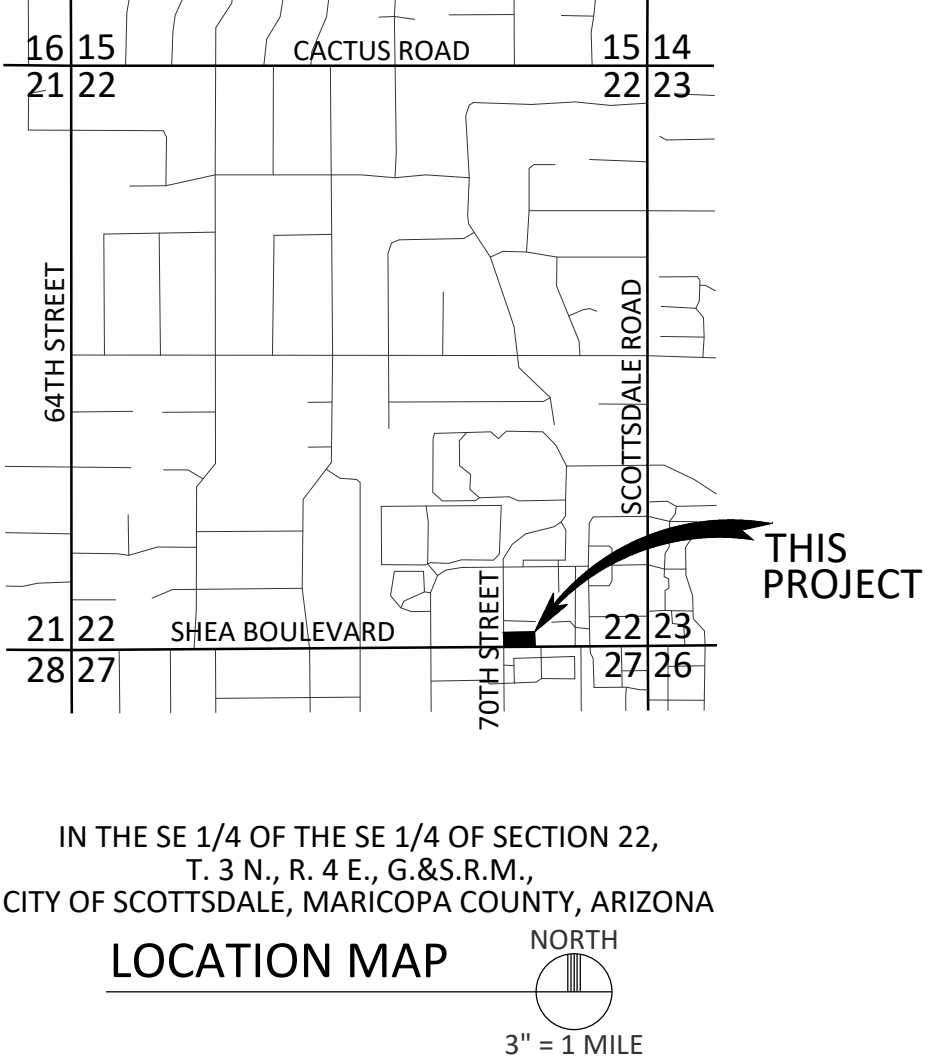


# PRELIMINARY IMPROVEMENT PLAN for BLACK ROCK COFFEE - 7000 EAST SHEA

7000 EAST SHEA BOULEVARD SCOTTSDALE, ARIZONA  
A PORTION SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE  
GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA



PROJECT OVERVIEW



## PROJECT INFORMATION

PROJECT DESCRIPTION:  
THE PROJECT CONSISTS OF THE DEMOLITION OF AN EXISTING BUILDING AND THE CONSTRUCTION OF A NEW SINGLE-STORY DRIVE-THRU COFFEE SHOP WITH ALL REQUIRED GRADING & DRAINAGE, PARKING, UTILITY AND PAVING IMPROVEMENTS.

ADDRESS:  
7000 EAST SHEA BOULEVARD  
SCOTTSDALE, ARIZONA 85254

APN: 175-42-136N

ZONING: C-2

SITE AREA: 46,643 SF (1.07 AC)

## SURVEY NOTES

- THE SURVEY FOR THIS PROJECT WAS PERFORMED BY:  
SUPERIOR SURVEYING SERVICES, INC.  
2122 WEST LONE CACTUS DRIVE, SUITE 11  
PHOENIX, ARIZONA 85027  
PH: 623-869-0223  
CONTACT: DAVID S. KLEIN, R.L.S.
- THE BASIS OF BEARINGS FOR THIS PROJECT IS THE MONUMENT LINE OF SHEA BOULEVARD, ALSO BEING THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 22, USING A BEARING OF NORTH 89°33'07" EAST, AS PER THE RECORD OF SURVEY IN BOOK 1366, PAGE 41, RECORDS OF MARICOPA COUNTY, ARIZONA.
- THE BASIS OF ELEVATION FOR THIS PROJECT IS THE CITY OF SCOTTSDALE BENCHMARK ID: 3272, BEING A 3" CITY OF SCOTTSDALE BRASS CAP IN HANDHOLE, LOCATED AT THE INTERSECTION OF SHEA BOULEVARD & SCOTTSDALE ROAD, HAVING AN ELEVATION OF 1351.26', (NAVD88).

## BENCHMARK

THE BENCHMARK USED FOR THIS PLAN IS THE CITY OF SCOTTSDALE BENCHMARK ID: 3272, BEING A 3" CITY OF SCOTTSDALE BRASS CAP IN HANDHOLE, LOCATED AT THE INTERSECTION OF SHEA BOULEVARD & SCOTTSDALE ROAD, HAVING AN ELEVATION OF 1351.26', (NAVD88).

## LEGAL DESCRIPTION

THE NORTH 160.00 FEET OF THE SOUTH 225.00 FEET OF THE WEST HALF OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 3 NORTH, RANGE 4 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA;  
EXCEPT THE EAST 320.00 FEET; AND  
EXCEPT THE WEST 30.00 FEET; AND  
EXCEPT BEGINNING AT THE INTERSECTION OF THE EAST LINE OF THE WEST 30.00 FEET OF SAID WEST HALF WITH THE NORTH LINE OF THE SOUTH 65.00 FEET OF SAID WEST HALF;  
THENCE NORTHERLY ALONG SAID EAST LINE, 12.00 FEET TO THE BEGINNING OF A TANGENT CURVE NORTHEASTERLY;  
THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE TO A POINT OF TANGENCY IN SAID NORTH LINE, SAID POINT BEARS 12.00 FEET EASTERLY FROM THE POINT OF BEGINNING;  
THENCE WESTERLY ALONG SAID NORTH LINE, 12.00 FEET TO THE POINT OF BEGINNING.

## FLOODPLAIN INFORMATION

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP PANEL NUMBER 04013C1760L, DATED OCTOBER 16, 2013 THE PARCEL IS LOCATED IN THE ZONE X (SHADED) AREA, WHICH IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

## DRAINAGE STATEMENT

-SITE IS NOT IN A SPECIAL FLOOD HAZARD AREA  
-OFFSITE FLOWS DO NOT AFFECT THIS SITE  
-EXTREME STORM OUTFALLS THE SITE AT THE NORTHWEST CORNER AT THE ELEVATION OF 1353.86.

## OWNER/DEVELOPER

DPC COMPANIES  
7800 EAST UNION AVENUE, #800  
DENVER, COLORADO 80237  
PH: 303-796-8288  
ATTN: JUSTIN LUTGEN

## CIVIL ENGINEER

CYPRESS CIVIL DEVELOPMENT  
4450 NORTH 12TH STREET, #228  
PHOENIX, ARIZONA 85014  
PH: 623-282-2498  
ATTN: JEFF HUNT, PE

## ARCHITECT

VERTICAL DESIGN STUDIOS  
4650 EAST COTTON CENTER BOULEVARD  
SUITE 140  
PHOENIX, ARIZONA 85040  
PH: 602-395-1000  
ATTN: JUSTIN GREGONIS

## UTILITIES

WATER: CITY OF SCOTTSDALE  
SEWER: CITY OF SCOTTSDALE  
ELECTRIC: ARIZONA PUBLIC SERVICE  
GAS: SOUTHWEST GAS  
TELEPHONE: CENTURYLINK  
CABLE: COX COMMUNICATIONS

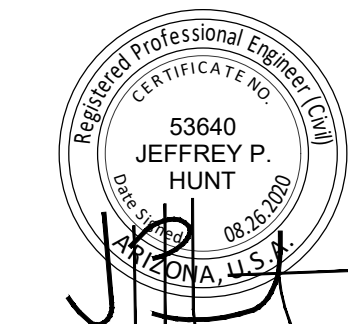
## SHEET INDEX

- COVER SHEET
- GRADING AND DRAINAGE PLAN
- ONSITE UTILITY PLAN

CYPRESS  
CIVIL

4450 north 12th street  
suite 228  
phoenix, arizona 85014  
p: 623.282.2498  
e: jphunt@cypresscivil.com

PRELIMINARY IMPROVEMENT PLAN for  
BLACK ROCK COFFEE - 7000 EAST SHEA  
7000 EAST SHEA BOULEVARD SCOTTSDALE, ARIZONA

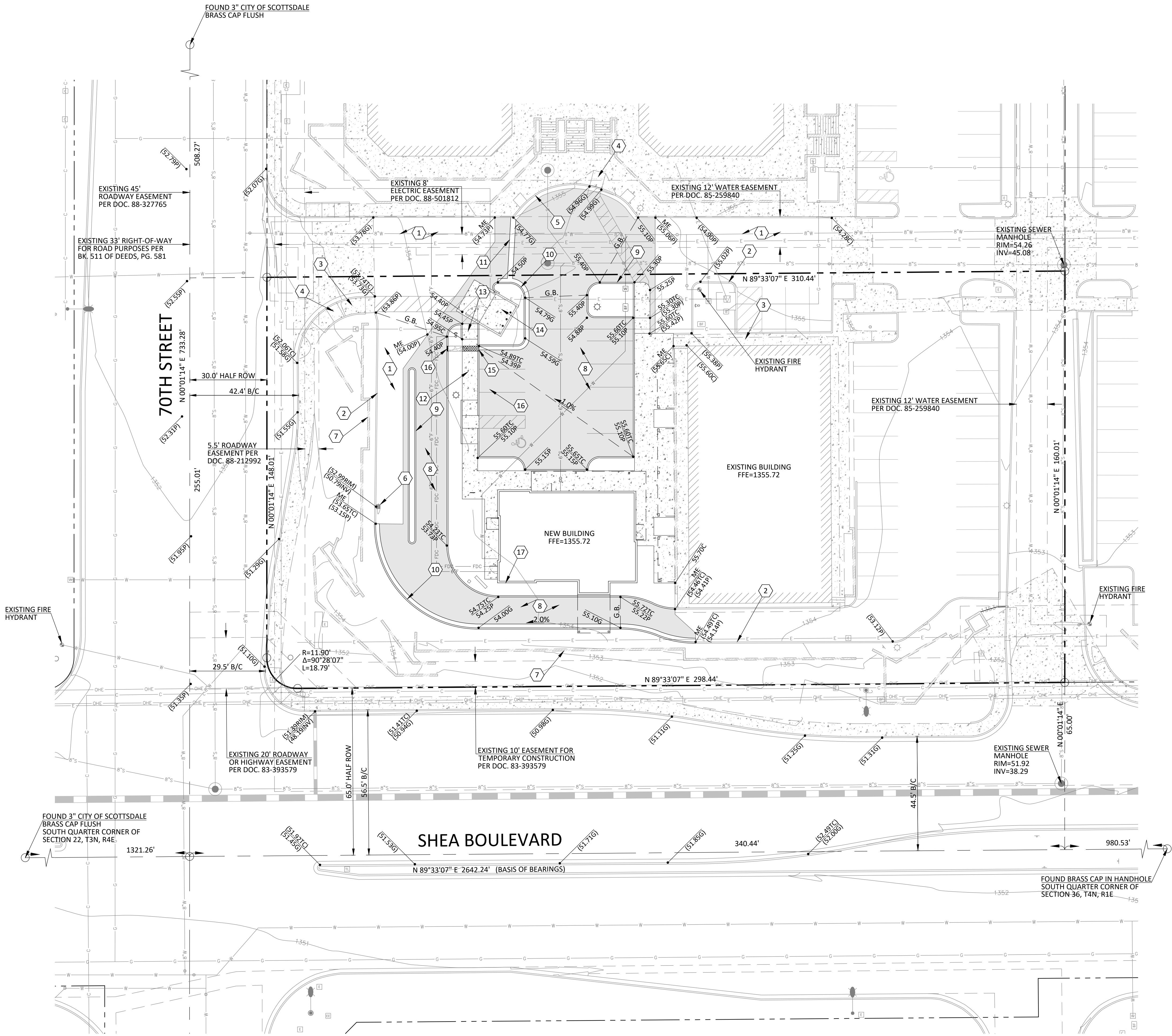


DRAWN:	PT
DESIGNED:	AS
CHECKED:	JH
DATE:	08-26-2020
JOB NO:	19.131
SHEET NUMBER	





THESE PLANS PRELIMINARY AND ARE NOT FOR CONSTRUCTION OR RECORDING



- KEYNOTES**
- 1 EXISTING ASPHALT TO REMAIN.
  - 2 EXISTING CURB TO REMAIN.
  - 3 EXISTING CONCRETE SIDEWALK TO REMAIN.
  - 4 EXISTING ACCESSIBLE RAMP TO REMAIN.
  - 5 EXISTING CONCRETE CURB AND GUTTER TO REMAIN.
  - 6 EXISTING STORM DRAIN CATCH BASIN TO REMAIN.
  - 7 EXISTING MASONRY SCREEN WALL TO REMAIN.
  - 8 NEW ASPHALT PAVEMENT.
  - 9 NEW CONCRETE VERTICAL CURB.
  - 10 NEW CONCRETE VERTICAL CURB AND GUTTER.
  - 11 NEW VALLEY GUTTER.
  - 12 NEW CONCRETE SIDEWALK.
  - 13 NEW ACCESSIBLE ACCESS RAMP.
  - 14 NEW TRASH ENCLOSURE.
  - 15 NEW SCUPPER AND RIP RAP SPILLWAY.
  - 16 NEW CURB OPENING.
  - 17 ROOF DOWNSPOUT LOCATION.

**PRELIMINARY IMPROVEMENT PLAN for  
BLACK ROCK COFFEE - 7000 EAST SHEA**  
7000 EAST SHEA BOULEVARD SCOTTSDALE, ARIZONA

grading and drainage plan

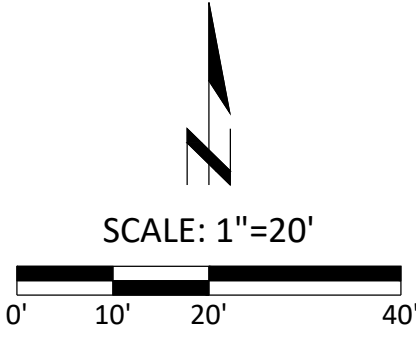
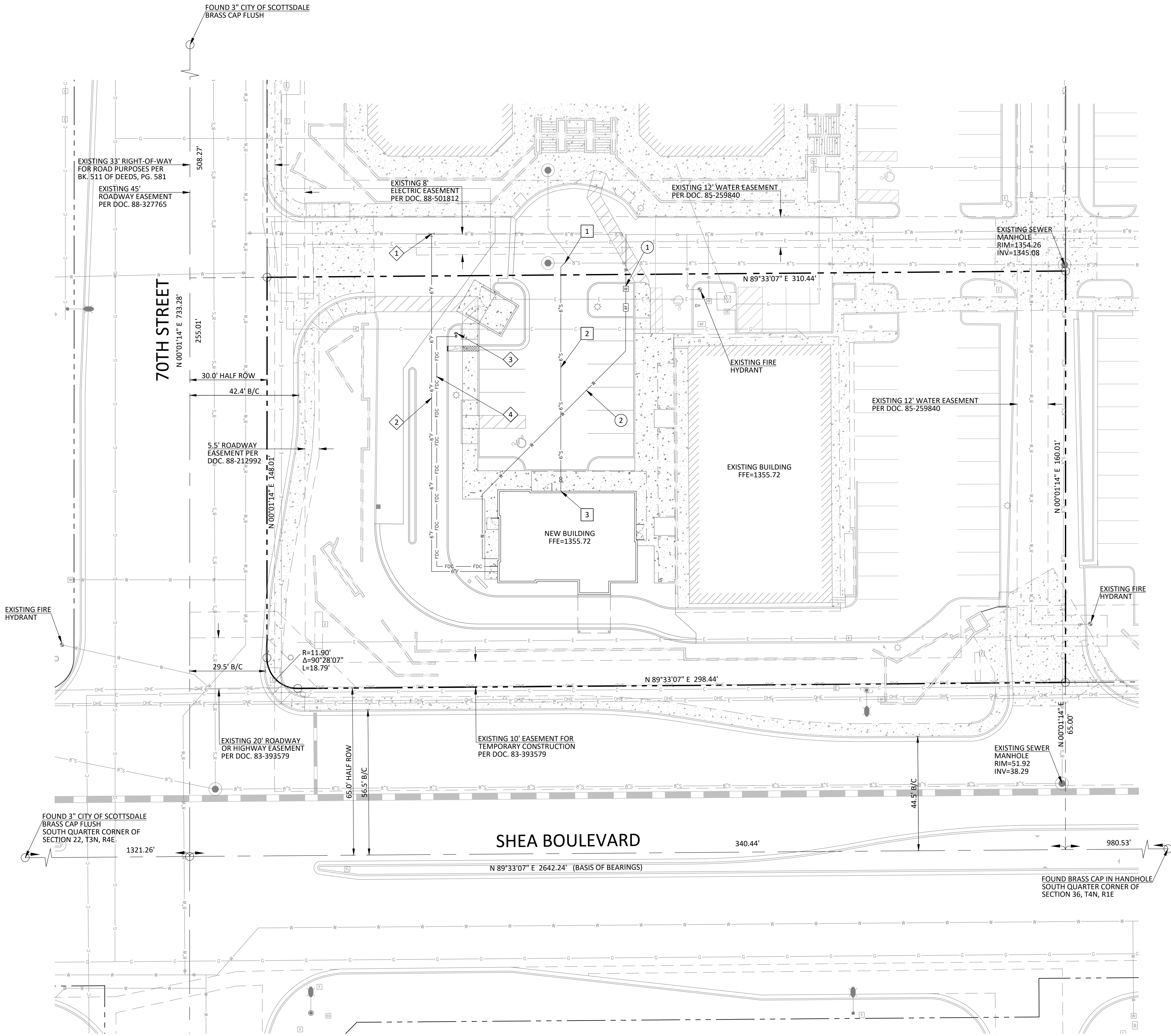
**CYPRESS CIVIL**  
4450 north 12th street  
suite 228  
phoenix, arizona 85014  
p: 623.282.2498  
e: jphunt@cypresscivil.com



DRAWN:	PT
DESIGNED:	AS
CHECKED:	JH
DATE:	08-26-2020
JOB NO:	19.131
SHEET NUMBER	



THESE PLANS PRELIMINARY AND ARE NOT FOR CONSTRUCTION OR RECORDING



PRIVATE WATER KEYNOTES

- 1 NEW 1" SERVICE AND METER FOR DOMESTIC WATER SERVICE.
- 2 NEW 1-1/2" DOMESTIC WATER LINE.

PRIVATE FIRE LINE KEYNOTES

- 1 CONNECT TO EXISTING 8" WATER FOR FIRE SERVICE.
- 2 NEW 6" DIP FIRE LINE.
- 3 NEW REMOTE FDC LOCATION.
- 4 NEW FDC PIPE.

PRIVATE SEWER KEYNOTES

- 1 CONNECT TO EXISTING 8" PRIVATE SEWER MAIN.
- 2 NEW 6" PVC SDR-35 SEWER LINE.
- 3 CONNECT TO BUILDING SANITARY SEWER.

PRELIMINARY IMPROVEMENT PLAN for  
BLACK ROCK COFFEE - 7000 EAST SHEA  
7000 EAST SHEA BOULEVARD SCOTTSDALE, ARIZONA

onsite utility plan

**CYPRESS CIVIL**  
4450 north 12th street  
suite 228  
phoenix, arizona 85014  
p: 623.282.2498  
e: jphunt@cypresscivil.com

NO.	DATE	REVISION



DRAWN:	PT
DESIGNED:	AS
CHECKED:	JH
DATE:	08-26-2020
JOB NO:	19.131
SHEET NUMBER	

## Appendix D

### Fire Flow Test Results



# Arizona Flow Testing LLC

## **HYDRANT FLOW TEST REPORT**

Project Name:	BRC Shea
Project Address:	70 <sup>th</sup> Street and Shea (NEC), Scottsdale, Arizona 85254
Arizona Flow Testing Project No.:	20332
Client Project No.:	Not Provided
Flow Test Permit No.:	C62962
Date and time flow test conducted:	August 31, 2020 at 7:30 AM
Data is current and reliable until:	February 28, 2021
Conducted by:	Floyd Vaughan – Arizona Flow Testing, LLC (480-250-8154)
Witnessed by:	Aaron Roby – City of Scottsdale-Inspector (480-407-7022)

### Raw Test Data

Static Pressure: **82.0 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **62.0 PSI**  
(Measured in pounds per square inch)

Pitot Pressure: **30.0 PSI**  
(Measured in pounds per square inch)

Diffuser Orifice Diameter: 4- Inch Pollard Diffuser  
(Measured in inches)

Coefficient of Diffuser: .9

Flowing GPM: **2,354 GPM**  
(Measured in gallons per minute)

GPM @ 20 PSI: **4,336 GPM**

### Data with 10 PSI Safety Factor

Static Pressure: **72.0 PSI**  
(Measured in pounds per square inch)

Residual Pressure: **52.0 PSI**  
(Measured in pounds per square inch)

Distance between hydrants: Approx. 280 Feet

Main size: Not Provided

Flowing GPM: **2,354 GPM**

GPM @ 20 PSI: **3,943 GPM**

Scottsdale requires a maximum Static Pressure of 72 PSI for AFES Design.

### **Flow Test Location**

North ↑

